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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/464,497	12/15/1999	MICHAEL A'HEARN	99-120-4	7647

7590                    06/05/2002

J W BURROWS CATERPILLAR INC  
PATENT DEPARTMENT  
AB 6490  
100 N.E.ADAMS STREET  
PEORIA, IL 616296490

[REDACTED] EXAMINER

LOPEZ, FRANK D

[REDACTED] ART UNIT

[REDACTED] PAPER NUMBER

3745

DATE MAILED: 06/05/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/464,497	A'HEARN ET AL.	
	Examiner	Art Unit	
	F. Daniel Lopez	3745	

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) Responsive to communication(s) filed on 04 April 2002.

2a) This action is FINAL.      2b) This action is non-final. .

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) Claim(s) 1-16 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-16 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) All b) Some \* c) None of:  
1. Certified copies of the priority documents have been received.  
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____	6) <input type="checkbox"/> Other: _____

***Response to Amendment***

Applicant's arguments filed April 4, 2002, have been fully considered but they are not deemed to be persuasive.

Applicant argues that Budzich does not provide communication between one of the first and second outlet ports and the supply inlet port of the second directional control valve, when the supply inlet port of the first directional control valve is in communication with one of the first and second outlet ports of the first directional control valve. Applicant is mistaken. The first (13) and second (12) directional control valves of Budzich are identical, with the supply ports connected together (by the top of the T-section of passage 19). When the second directional control valve is in the shown position, where the supply port is connected to both first and second outlet ports, these first and second outlet ports are also connected to the supply port of the first directional control valve.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 112***

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1 line 29 "a pressure condition of" makes no sense in conjunction with the rest of the phrase "one of the first and second outlet ports being in communication with the supply inlet port". In claim 1 line 29 "the first and second outlet ports" is confusing, since it is unclear whether they refer to the ports of the first directional control valve or the second directional control valve.

Claims 2-16 are indefinite, since they depend from claim 1.

***Claim Rejections - 35 USC § 102***

Claim 1 is rejected under 35 U.S.C. § 102(b) as being clearly anticipated by Budzich.

***Claim Rejections - 35 USC § 103***

Claims 4-8 are rejected under 35 U.S.C. § 103 as being unpatentable over Budzich in view of Johnson. Budzich discloses a fluid system with a single source (10) of pressurized supply fluid that receives fluid from a reservoir (16), comprising first and second fluid circuits connected to the single source, having respecting first (e.g. 12) and second (e.g. 13) directional control valves connected to respective first and second cylinders having head end and rod end ports; wherein each directional control valve includes supply inlet, exhaust and first and second outlet ports connected respectively to the supply source, reservoir, and head end and rod end ports of the respective cylinder; with each directional control valve movable from a central position to first and second operating positions, with the supply inlet, exhaust and first and second outlet ports blocked in the central position, and with the supply inlet port communicating with the second outlet port, and the exhaust port communicating with the first outlet port in the first operable position; wherein when the first directional control valve is in the second operable position, the supply inlet port communicates with the first outlet port, and the second outlet port communicates with the supply inlet port; and wherein when the second directional control valve is in the second operable position, the supply inlet port communicates with the first outlet port, and the second outlet port communicates with the exhaust port; but does not disclose first and second vented load check valves disposed between first and second outlet ports, respectively, of the first directional control valve, and head end and rod end ports, respectively, of the first fluid cylinder; a pilot control system having a control input arrangement connected to a source of pressurized pilot fluid, with first and second directional control valves being movable from their center positions by pilot fluid directed through first, second, third and fourth pilot conduits; with first and second vented load check valves each having pressure chambers in communication with head end or rod end ports, respectively, through

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orifice conduits, and the pilot control system includes respective first and second two position valves, positioned between the respective pressure chamber and the reservoir, spring biased to a closed position and movable in response to pilot fluid directed to respective first and second ends of the first directional control valve; with a third and fourth vented load check valves disposed between first and second outlet ports, respectively, of the second directional control valve, and head end and rod end ports, respectively, of the second fluid cylinder; with third and fourth vented load check valves each having pressure chambers in communication with head end or rod end ports, respectively, through orifice conduits, and the pilot control system includes respective third and fourth two position valves, positioned between the respective pressure chamber and the reservoir, spring biased to a closed position and movable in response to pilot fluid directed to respective first and second ends of the second directional control valve.

Johnson teaches, for a fluid circuit having a directional control valve which includes supply inlet, exhaust and first and second outlet ports connected respectively to a supply source, reservoir, and head end and rod end ports of a cylinder; and movable from a central position to first and second operating positions, that there are first and second vented load check valves (20) disposed between first and second outlet ports, respectively, of the first directional control valve, and head end and rod end ports, respectively, of the first fluid cylinder; a pilot control system having a control input arrangement (22) connected to a source of pressurized pilot fluid, with the directional control valve being movable from its center position by pilot fluid directed through first and second pilot conduits (24, 26); with first and second vented load check valves each having pressure chambers (74) in communication with head end or rod end ports, respectively, through orifice conduits (82), and the pilot control system includes respective first and second two position valves (90), positioned between the respective pressure chamber and the reservoir, spring biased to a closed position and movable in response to pilot fluid directed to respective first and second ends of the first directional control valve, for the purpose of preventing creep of the cylinder.

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Since Budzich and Johnson are both from the same field of endeavor, the purpose disclosed by Johnson would have been recognized in the pertinent art of Budzich. It would have been obvious at the time the invention was made to one having ordinary skill in the art to add first and second vented load check valves disposed between first and second outlet ports, respectively, of the first directional control valve of Budzich, and head end and rod end ports, respectively, of the first fluid cylinder; a pilot control system having a control input arrangement connected to a source of pressurized pilot fluid, with first and second directional control valves being movable from their center positions by pilot fluid directed through first, second, third and fourth pilot conduits; with first and second vented load check valves each having pressure chambers in communication with head end or rod end ports, respectively, through orifice conduits, and the pilot control system includes respective first and second two position valves, positioned between the respective pressure chamber and the reservoir, spring biased to a closed position and movable in response to pilot fluid directed to respective first and second ends of the first directional control valve; and add third and fourth vented load check valves disposed between first and second outlet ports, respectively, of the second directional control valve of Budzich, and head end and rod end ports, respectively, of the second fluid cylinder; with third and fourth vented load check valves each having pressure chambers in communication with head end or rod end ports, respectively, through orifice conduits, and the pilot control system includes respective third and fourth two position valves, positioned between the respective pressure chamber and the reservoir, spring biased to a closed position and movable in response to pilot fluid directed to respective first and second ends of the second directional control valve, as taught by Johnson, for the purpose of preventing creep of the first and second cylinders.

### ***Conclusion***

Claims 2, 3 and 9-16 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

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Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Lopez whose telephone number is (703) 308-0008. The examiner can normally be reached on Monday-Thursday from 6:30 AM -4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Look, can be reached on (703) 308-1044. The fax number for this group is (703) 872-9302. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0861.



F. Daniel Lopez  
Primary Examiner  
Art Unit 3745  
June 04, 2002